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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,824	06/11/2001	Vishnu Balan	LSI-01-166	3472

7590 05/17/2002

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Milpitas, CA 95035

EXAMINER

GLENN, KIMBERLY E

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 05/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/879,824

Applicant(s)

BALAN ET AL.

Examiner

Kimberly E Glenn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-21 is/are allowed.
- 6) ☒ Claim(s) 22,27 and 32 is/are rejected.
- 7) ☒ Claim(s) 23-26,28-31 and 33-36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 22, 27 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Walden US Pat. 5,030,926.

3. Walden disclose a circuit for controlling a frequency of a crystal oscillator being coupled between an input node and output node, the circuit comprising a first capacitor array coupled between the input node and a reference voltage, the first capacitor array including a first plurality of switched capacitors and having a first total capacitance; a second capacitor array coupled between the output node and the reference voltage, the second capacitor array including a second plurality of switched capacitors and having a second total capacitance; a input for receiving a frequency control signal and a capacitance controller coupled to the first capacitor array and the second capacitor array for alternately switching a switched capacitor in the first capacitor array and a switched capacitor in the second capacitor based on the frequency control signal. The method steps to the above-disclosed apparatus are inherent. (See figure 2)

***Allowable Subject Matter***

4. Claims 1-21 are allowed.

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5. Claims 23-26, 28-31 and 33 -36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: With regards to claim 1, 4, 14 and 18, the prior art of record does not disclose or fairly teach the target voltage being set to be equal to  $2V_{th}$ , where  $V_{th}$  is a threshold voltage of the output transistor. With regards to claims 23,28 and 33 the first capacitor array having a capacitance about twice as large as that of a unit capacitor of a conventional array having a total capacitance being the same as the first total capacitance. With regards to claims 25,30, and35 the second capacitor array having a capacitance about twice as large as that of a unit capacitor of a conventional array having a total capacitance being the same as the second total capacitance.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jansson US Pat. 6,278,338 disclose a circuit comprising a crystal resonator, a current source supplying a bias current to the crystal resonator, a output transistor coupled to the crystal resonator and the current source, a peak detector coupled to an output of the crystal oscillator, detecting a peak voltage of an output signal of the crystal oscillator and a controller in the peak detector controlling the current source in accordance with a difference between the peak voltage and the target voltage. (See figure 5 and 6 and column 6 line 24 through column 10 line 15).

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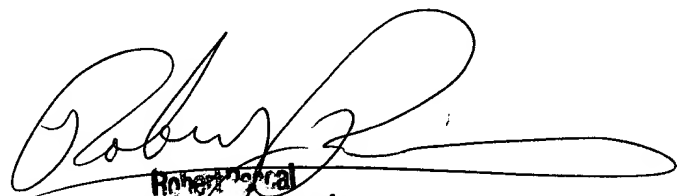
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly E Glenn whose telephone number is (703) 306-5942. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Kimberly E Glenn  
Examiner  
Art Unit 2817

keg  
May 15, 2002

  
Robert Pascal  
Supervisory Patent Examiner  
Technology Center 2817